

Remarks:

Reconsideration of the application is requested.

Claims 1, 5, 7-11, and 22-25 remain in the application.

Claims 1, 5, 10, and 11 have been amended. A marked-up version of the claims is attached hereto on separate pages.

In item 2 on page 2 of the above-identified Office action, claims 1, 5, 7-11, and 22-24 have been rejected as being indefinite under 35 U.S.C. § 112.

More specifically, the Examiner has stated that in claims 1 and 10 on lines 11-12 and 13-14 respectively, the phrase "... subframe having a position controlling a position of said cylinders..." is unclear. The Examiner further stated that it is uncertain how a position controls another position. Claims 1 and 10 have been amended to facilitate prosecution of the application, and now reads "said subframe controlling a position". Therefore, the rejection of claims 1 and 10 is now moot.

In item 3 on page 2 of the Office action, the Examiner stated that the term "further drive" in claims 1, 10, and 22 is a relative term, which renders the claim indefinite. The Examiner further stated that the term "further drive" is not

defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Examiner stated that in this case, the term further is indefinite due to the fact it causes the misconception that this drive is further away from the first drive. The term "further drive" is used to designate that the drive is another drive separate from the one drive. This is made clear by its use in the claim "a further drive connected to said subframe for pivoting said subframe about said pivot point". Further clarification can be found on page 9, lines 15-22 of the specification. The claims are believed to be definite. Therefore, claims 1, 10, and 22 have not been amended to overcome the rejection.

In item 4 on page 2 of the Office action, the Examiner stated that claims 5 and 11 recite the limitation "said second drive" both on line 3. The Examiner stated that there is insufficient antecedent basis for this limitation in the claim. Claim 5 has been amended so as to facilitate prosecution of the application. Antecedent basis for "said second drive" in claim 11 can be found in line 2 of claim 11. Therefore, claim 11 has not been amended to overcome the rejection.

In item 5 on page 2 of the Office action, the Examiner stated that claim 9 recites the limitation "the group" on line 2. The Examiner further stated that there is insufficient antecedent basis for this limitation in the claim. It is respectfully noted that the Examiner is in error, "the group" is used for a proper Markush group (see MPEP §2173.05(h) attached hereto). Since the Markush group is in proper format, claim 9 has not been amended to overcome the rejection.

In item 5 on page 2 of the Office action, the Examiner stated that in claim 11, line 1, the phrase "... wherein said drive..." is unclear. The Examiner stated that it is uncertain if "said drive" refers to the one drive or the further drive. Claim 11 has been amended so as to facilitate prosecution of the application and now reads "said one drive". Therefore, the rejection of claim 11 is now moot.

In item 6 on page 3 of the Office action, the Examiner stated that claims 23 and 24 recite the limitation "the position" both on line 4. The Examiner stated that there is insufficient antecedent basis for this limitation in the claim. Regarding claim 23 it is respectfully noted that the Examiner is in error the limitation "the position" is not recited in claim 23. Regarding claim 24 it is noted that claim 1 recites the limitation "said subframe controlling a

position of said cylinders". Therefore claim 1 provides antecedent basis for "the position". Due to the reasons noted above, claims 23 and 24 have not been amended to overcome the rejection.

In item 6, on page 3 of the Office action, the Examiner stated that in claim 25, lines 5-6, the phrase "... at least one turn around..." is unclear. The Examiner stated that it is uncertain how far or long one turn is. It is noted that during a telephone conversation on March 18, 2003, the Examiner was directed to the definition of helix as enclosed in the response dated October 3, 2002. The definition states that a helix is a three-dimensional curve with one or more turns about an axis. The Examiner agreed that the phrase "at least one turn around" is clear. Therefore, the claim has not been amended to overcome the rejection.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, first and second paragraphs. Should the Examiner find any further objectionable items, counsel would appreciate a telephone call during which the matter may be resolved. The above-noted changes to the claims are provided solely for cosmetic or clarificatory reasons. The changes are not provided for overcoming the prior art nor for any reason related to the statutory requirements for a patent.

In item 8 on page 3 of the Office action, claims 1, 5, 7-11, and 22-25 have been rejected as being obvious over Spengler (U.S. Patent No. 4,014,234) in view of Shore et al. (U.S. Patent No. 5,526,726) and in view of Barwise et al. (U.S. Patent No. 4,053,004) under 35 U.S.C. § 103.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

The Spengler reference discloses the actuation of clutches and brakes so that the cutting cylinder is positively driven for predetermined durations on a once per product basis to achieve control of the length of the resulting product (column 2, 42-47). The reference further discloses a journal shaft (29) to which a cutting roller is tiltably secured in such a manner that the cutting roller may be tilted or journaled about the journal shaft by a journal drive (45), whereby the cutting roller may be adjusted into a different operating position **after each cutting operation** (column 2, lines 48-55). Furthermore, Spengler discloses that the cutting roller is only operated when a cut is to be performed while the counter pressure roller is continuously driven to continuously feed or advance the sheet material to be cut in a given direction.

This type of operation is possible because the strip steel knives attached to the cutting roller do not extend all around the entire circumference of the cutting roller, so that portions of the circumference of the cutting roller are not provided with any cutting knives (column 2, lines 32-41).

The Spengler reference does not disclose that it is possible to use the angular position of the cylinders in combination with an adjustment of the angular velocity of the cylinders relative to the velocity of the web of material to achieve cut edges that will be perpendicular to the direction of web travel at all times and at the same time allow production of signatures with any desired length within a range.

The Spengler reference teaches away from the combination of references cited by the Examiner and also away from the invention of the instant application for the reasons set forth below.

First, Spengler discloses that the cutting roller is only rotated when a cut is to be performed because the counter pressure roller is continuously driven to feed the sheet material. This is contrary to the invention of the instant application as claimed, in which the one drive continuously rotates the first cutting cylinder for cutting the ribbon and provides the signature with a straight smooth cut.

Furthermore, Spengler teaches away from Shore et al. due to the fact that the cutting roller of Spengler is only rotated when a cut is to be performed and a drive (45) for adjusting the cutting roller into different operating positions is only adjusted **after each cutting operation**. This is also contrary to the invention of the instant application in which a sensor provides information to the control unit for adjusting the subframe, thereby controlling the angle of the cutting cylinder during the continuous operation of the cutting unit.

Regarding the Examiner's statement in the first paragraph on page 4 of the Office action, that it would have been obvious to provide Spengler with the helical blade of Barwise et al. is not accurate because it is explicitly taught away from by Spengler. Spengler discloses in column 2, lines 36-41 that in order to allow the continuous feed of the ribbon by the counter pressure roller, the steel knives attached to the cutting roller **do not extend** all around the entire circumference of the cutting roller, so that portions of the circumference of the cutting knives are not provided with any cutting knives. This directly teaches away from the combination of Spengler and Barwise et al..

A critical step in analyzing the patentability of claims pursuant to 35 U.S.C. § 103 is casting the mind back to the

time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher." Id. (quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)).

Most if not all inventions arise from a combination of old elements. See In re Rouffet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998). Thus, every element of a claimed invention may often be found in the prior art. See id. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See id. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the appellant. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 163.5, 1637 (Fed. Cir. 1998); In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617. In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. See WMS Gaming, Inc. v. International Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999). The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) (and cases cited therein).

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Whether the examiner relies on an express or an implicit showing, the examiner must provide particular findings related thereto. See Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617.

Broad conclusory statements standing alone are not "evidence." Id. When an examiner relies on general knowledge to negate patentability, that knowledge must be articulated and placed on the record. See In re Lee, 277 F.3d 1338, 1342-45, 61 USPQ2d 1430, 1433-35 (Fed. Cir. 2002).

Upon evaluation of the examiner's response, it is respectfully believed that the evidence adduced by the examiner is

insufficient to establish a prima facie case of obviousness with respect to the claims. Accordingly, the examiner is requested to withdraw the rejection.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 10, or 25. Claims 1, 10, and 25 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claims 1 or 10, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1, 5, 7-11, and 22-25 are solicited.

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In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any fees which might be due with respect to  
Sections 1.16 and 1.17 to the Deposit Account of Lerner &  
Greenberg P.A., No. 12-1099.

Respectfully submitted,



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Marked-up version of the claims:

Claim 1 (twice-amended). A cutting unit, comprising:

a pair of cylinders disposed opposite one another with a gap formed there-between for receiving a ribbon, said pair of cylinders including a first cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a second cylinder;

one drive rotating said first cutting cylinder for cutting the ribbon and providing a signature cut from the ribbon with a smooth, straight edge;

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a subframe having a pivot point, said subframe being pivotable about said pivot point, said subframe supporting said cylinders, and said subframe [having a position] controlling a position of said cylinders in regard to the ribbon and therefore controlling a cutting length of the ribbon;

a further drive connected to said subframe for pivoting said subframe about said pivot point;

a control unit connected to and controlling said further drive and said one drive for controlling a rotational speed of said first cutting cylinder; and

a sensor connected to said control unit, said sensor providing control signals to said control unit for controlling operation of said cylinders.

Claim 5 (twice-amended). The cutting unit according to claim 1, wherein said one drive is a first drive, and including a second drive rotating and mounting said second cylinder, said first drive and said second drive are supported by said subframe.

Claim 10 (twice-amended). A folder, comprising:

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a frame;

a subframe pivotably mounted in said frame about a pivot point;

one drive housed in said subframe;

a pair of cylinders supported by said subframe and disposed opposite one another with a gap formed there-between for receiving a ribbon, said pair of cylinders including a first

cutting cylinder having a periphery with a cutting knife disposed helically about said periphery and a second cylinder, said first cutting cylinder driven by said one drive for cleanly cutting the ribbon and providing a signature cut from the ribbon with a smooth, straight edge;

said subframe [having a position] controlling a position of said cylinders in regard to the ribbon and therefore controlling a cutting length of the ribbon;

a further drive connected to said subframe for pivoting said subframe about said pivot point;

a control unit connected to and controlling said further drive and said one drive for controlling a rotational speed of said first cutting cylinder; and

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a sensor connected to said control unit, said sensor providing control signals to said control unit for controlling operation of said cylinders.

Claim 11 (amended). The folder according to claim 10, wherein said one drive is a first drive and including a second drive rotating and mounting said second cylinder, said first drive and said second drive rotating said cylinders such that a component of travel of a point of contact between said

cylinders in a direction of travel of the ribbon matches a speed of the ribbon for cutting the ribbon in a straight line.

## PATENTABILITY

### 2173.05(i)

class or to an art-recognized class. However, when the Markush group occurs in a claim reciting a process or a combination (not a single compound), it is sufficient if the members of the group are disclosed in the specification to possess at least one property in common which is mainly responsible for their function in the claimed relationship, and it is clear from their very nature or from the prior art that all of them possess this property. While in the past the test for Markush-type claims was applied as liberally as possible, present practice which holds that claims reciting Markush groups are not generic claims (MPEP § 803) may subject the groups to a more stringent test for propriety of the recited members. Where a Markush expression is applied only to a portion of a chemical compound, the propriety of the grouping is determined by a consideration of the compound as a whole, and does not depend on there being a community of properties in the members of the Markush expression.

When materials recited in a claim are so related as to constitute a proper Markush group, they may be recited in the conventional manner, or alternatively. For example, if "wherein R is a material selected from the group consisting of A, B, C and D" is a proper limitation, then "wherein R is A, B, C or D" shall also be considered proper.

#### SUBGENUS CLAIM

A situation may occur in which a patentee has presented a number of examples which, in the examiner's opinion, are sufficiently representative to support a generic claim and yet a court may subsequently hold the claim invalid on the ground of undue breadth. Where this happens the patentee is often limited to species claims which may not provide him with suitable protection.

The allowance of a Markush-type claim under a true genus claim would appear to be beneficial to the applicant without imposing any undue burden on the Patent and Trademark Office or in any way detracting from the rights of the public. Such a subgenus claim would enable the applicant to claim all the disclosed operative embodiments and afford applicant an intermediate level of protection in the event the true genus claims should be subsequently held invalid.

The examiners are therefore instructed not to reject a Markush-type claim merely because of the presence of a true genus claim embracive thereof.

See also MPEP § 608.01(p) and § 715.03.

See MPEP § 803 for restriction practice re Markush-type claims.

#### (b) "Or" terminology

Alternative expressions using "or" are acceptable, such as "wherein R is A, B, C, or D." The following phrases were each held to be acceptable and not in violation of 35 U.S.C. 112, second paragraph in *In re Gaubert*, 524 F.2d 1222, 187 USPQ 664 (CCPA 1975): "made entirely or in part of"; "at least one piece"; and "iron, steel or any other magnetic material."

#### (c) "Optionally"

An alternative format which requires some analysis before concluding whether or not the language is indefinite involves the use of the term "optionally." In *Ex parte Cordova*, 10 USPQ2d 1949 (Bd. Pat. App. & Inter. 1989) the language "containing A, B, and optionally C" was considered acceptable alternative language because there was no ambiguity as to which alternatives are covered by the claim. A similar holding was reached with regard to the term "optionally" in *Ex parte Wu*, 10 USPQ2d 2031 (Bd. Pat. App. & Inter. 1989). In the instance where the list of potential alternatives can vary and ambiguity arises, then it is proper to make a rejection under 35 U.S.C. 112, second paragraph and explain why there is confusion.<

### 2173.05(i) Negative Limitations [R-1]

> The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, alth it negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph. Some older cases were critical of negative limitations because they tended to define the invention in terms of what it was not, rather than pointing out the invention. Thus, the court observed that the limitation "R is an alketyl radical other than 2-butetyl and 2,4-pentadienyl" was a negative limitation that rendered the claim indefinite because it was an attempt to claim the invention by excluding what the inventors did not invent rather than distinctly and particularly pointing out what they did invent. *In re Schechter*, 205 F.2d 185, 98 USPQ 144 (CCPA 1953).